



PROBLEM SOLVING ACTIVITY: CLIMATE CHANGE AND FEEDBACK LOOPS

OBJECTIVE: To relate climate change to the theory of feedback loops;

IMPORTANT TERMS: Feedback loop, hypothetical, model, conduction; convection, radiation, positive, negative, albedo, reflective;

MATERIALS: Copy of **Problem Solving Worksheet**, overhead diagrams of possible feedback relationships;

PROCEDURE:

1. Before beginning the activity, point out that scientists can only create *hypothetical* models of changes in the climate system.
2. Present some diagrams to the class of simple feedback mechanisms.
 - Discuss each with the class and decide if it would be positive or negative feedback.
3. Read through and discuss the introduction on the **Student Activity Sheet 1 and 2**.
 - Be sure students understand what a feedback mechanism is.
 - Explain and review vocabulary as needed.
4. Allow students to work with partners to interpret the diagram in the **Problem Solving Activity**.
 - Students should write complete sentences explaining what occurs in each part of the diagram.
 - Students should then complete the questions in the **Relating Cause And Effect** section.
 - Students should prepare a simple written and visual presentation to the class explaining their conclusion and supporting it with details.

